AMENDMENTS TO THE CLAIMS

Please cancel Claims 10 and 16; amend Claim 1-4, 9 and 15; and add new Claims 17-29 as follows.

LISTING OF CLAIMS

1. (currently amended) A method for preventing contamination of a heat exchanger made of a metal base material, the heat exchanger being installed in an air conditioner and being used for cooling air by a refrigerant supplied to the heat exchanger, the method comprising:

providing a film on [[a]] an external surface of the ~~metal base material~~ heat exchanger, the film generating an active oxygen when contacting water;

supplying the refrigerant to the heat exchanger to make the heat exchanger cooler than air to be cooled;

condensing water on the external surface of the heat exchanger on which the film is provided so that the film contacts with the condensed water;

generating active oxygen in the condensed water by the film; and

reducing an amount of organic substances adhered onto the external surface of the ~~metal base material~~ heat exchanger by using the generated active oxygen.

2. (currently amended) The method for preventing contamination of a heat exchanger according to claim 1 wherein ~~the active oxygen is generated, when condensed water generated on the surface of the metal base material contacts~~ the

generating step is performed by the film~~, and when the~~ by activating oxygen dissolved in the condensed water ~~is activated~~.

3. (currently amended) The method for preventing contamination of a heat exchanger according to claim 2, further comprising:

terminating the generation of the active oxygen by preventing ~~wherein~~ the contact between the film and the condensed water ~~is prevented and generation of the active oxygen is terminated,~~ by drying the external surface of the ~~metal base material~~ heat exchanger.

4. (currently amended) The method for preventing contamination of a heat exchanger according to claim 2, further comprising:

regenerating active oxygen generating capacity by preventing ~~wherein~~ the contact between the film and the condensed water ~~is prevented, and the active oxygen generating capacity is regenerated~~ by drying the external surface of the ~~metal base material~~ heat exchanger.

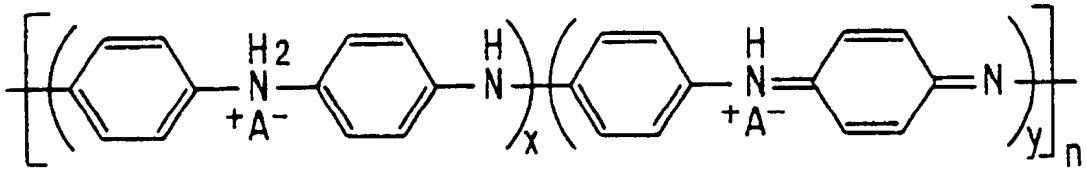
5. (original) The method for preventing contamination of a heat exchanger according to claim 1, wherein the metal base material is made of aluminum.

6. (original) The method for preventing contamination of a heat exchanger according to claim 1, wherein the film is made of an electron donating polymer.

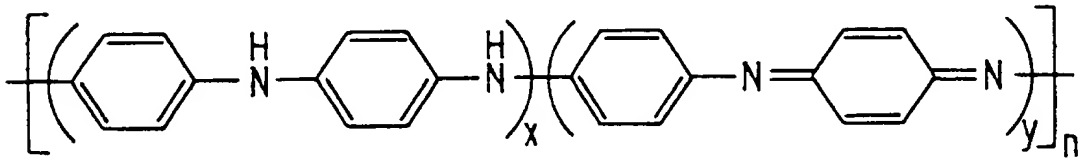
7. (original) The method for preventing contamination of a heat exchanger according to claim 6, wherein the electron donating polymer is made of a polyaniline or a derivative of the polyaniline.

8. (original) The method for preventing contamination of a heat exchanger according to claim 7, wherein the polyaniline is made of a polymer containing at least one of polyanilines represented by the following chemical formulas (1) to (4):

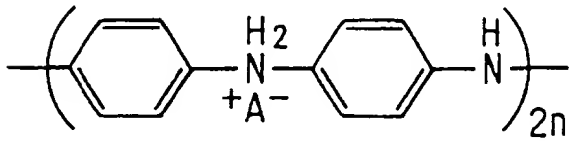
formula (1):



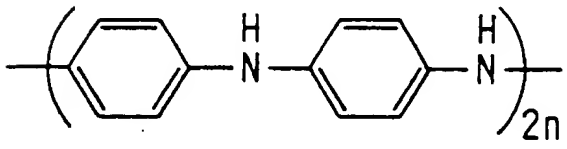
formula (2):



formula (3):



formula (4):



wherein, "A" indicates an anion, "n" indicates an integer in a range of 2-5000, "x" and "y" are the numbers which simultaneously satisfy the following equations: $x+y=1$ and $0 \leq y \leq 0.5$.

9. (currently amended) A heat exchanger made of a metal base material, the heat exchanger being installed in an air conditioner and being used for cooling air by a refrigerant supplied to the heat exchanger, the heat exchanger comprising:

an external surface where a condensed water is generated when the refrigerant is supplied to the heat exchanger to make the heat exchanger cooler than air to be cooled; and

a film provided on the external surface of the ~~metal base material~~ heat exchanger in a manner that the condensed water generated on the external surface comes in contact with the film, wherein

~~which~~ the film generates an active oxygen in the condensed water ~~when contacting water~~, and the generated active oxygen in the condensed water reduces an amount of odor components or organic substances adhered onto the external surface of the heat exchanger.

10. (cancelled)

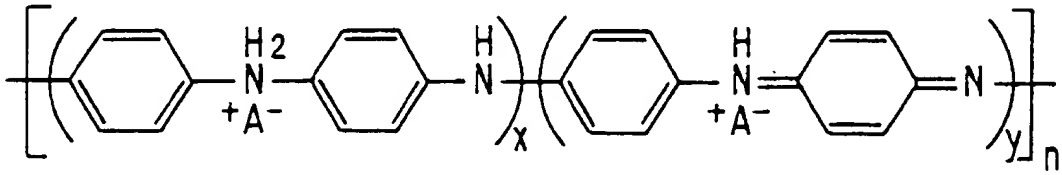
11. (original) The heat exchanger according to claim 9, wherein the metal base material is made of aluminum.

12. (original) The heat exchanger according to claim 9, wherein the film is made of an electron donating polymer.

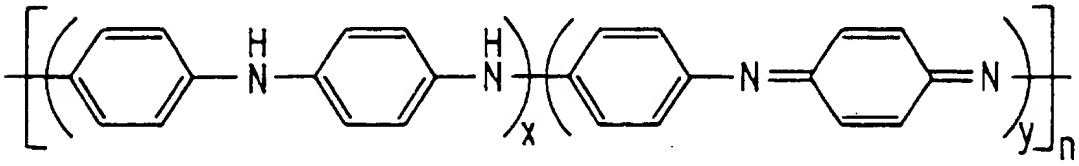
13. (original) the heat exchanger according to claim 12, wherein the electron donating polymer is a polyaniline or a derivative thereof.

14. (original) The heat exchanger according to claim 13, wherein the polyaniline is made of a polymer containing at least one of polyanilines represented by the following chemical formulas (1) to (4),

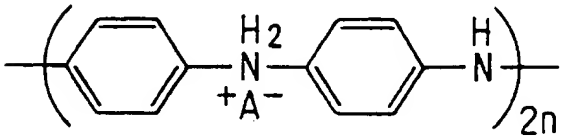
formula (1):



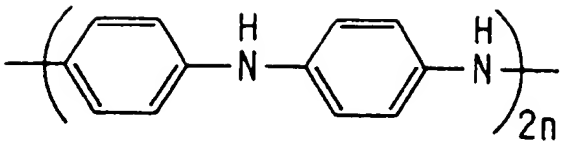
formula (2):



formula (3):



formula (4):



wherein, "A" indicates an anion, "n" indicates an integer in a range of 2-5000, "x" and "y" are the numbers which simultaneously satisfy the following equations: x+y=1 and 0≤y≤0.5.

15. (currently amended) [[The]] A heat exchanger for a vehicle air conditioner, the heat exchanger being used for cooling air by a refrigerant supplied to the heat exchanger, the heat exchanger comprising:

a heat exchanging portion in which a refrigerant [[fluid]] flowing therein is heat-exchanged with air, the heat exchanging portion being [[is]] made of a metal base material, the heat exchanging portion providing an external surface where condensed water is generated when the refrigerant is supplied to the heat exchanger to make the heat exchanger cooler than air to be cooled; and

a film provided on the external surface of the ~~metal base material~~ heat exchanger in a manner that the condensed water generated on the external surface comes in contact with the film, wherein

~~which~~ the film generates an active oxygen in the condensed water ~~when contacting water~~, and the generated active oxygen in the condensed water reduces an amount of odor components or organic substances adhered onto the external surface of the heat exchanger.

16. (cancelled)

17. (new) The method for preventing contamination of a heat exchanger according to claim 4, wherein the regenerating step is repeatedly performed in accordance with an operation of the air conditioner.

18. (new) The method for preventing contamination of a heat exchanger according to claim 17, wherein the regenerating step is performed when the air conditioner is stopped.

19. (new) The heat exchanger according to claim 9, wherein the film is provided on the external surface to be dried when the air conditioner is stopped.

20. (new) The heat exchanger according to claim 15, wherein the film is provided on the external surface to be dried when the air conditioner is stopped.

21. (new) A method for deodorizing air supplied by an air conditioner, comprising:

providing a heat exchanger made of a metal base material, the heat exchanger being used for cooling air by a refrigerant supplied to the heat exchanger;

providing a film on an external surface of the heat exchanger, the film generating an active oxygen when contacting water;

supplying the refrigerant to the heat exchanger to make the heat exchanger cooler than air to be cooled;

condensing water on the external surface of the heat exchanger on which the film is provided so that the film contacts with the condensed water;

generating active oxygen in the condensed water by the film; and

decomposing odor components in the condensed water by using the generated active oxygen so that deodorized air is supplied.

22. (new) The method claimed in claim 21, further performing sterilizing air by further comprising the steps of:

decomposing organic substances such as microorganisms and bacteria in the condensed water by using the generated active oxygen.

23. (new) The method claimed in claim 21, further comprising:

regenerating active oxygen generating capacity by preventing the contact between the film and the condensed water by drying the external surface of the heat exchanger.

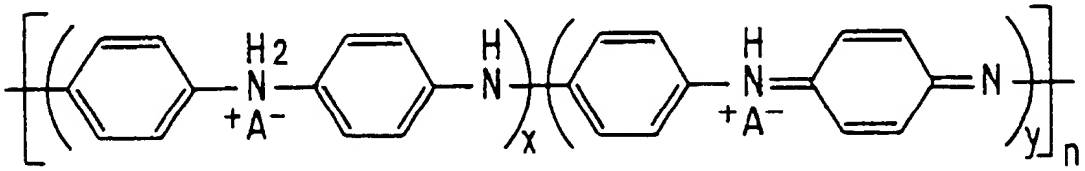
24. (new) The method claimed in claim 21, wherein the metal base material is made of aluminum.

25. (new) The method claimed in claim 21, wherein the film is made of an electron donating polymer.

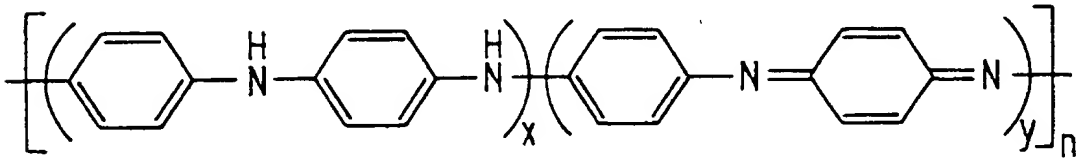
26. (new) The method claimed in claim 25, wherein the electron donating polymer is made of a polyaniline or a derivative of the polyaniline.

27. (new) The method claimed in claim 26, wherein the polyaniline is made of a polymer containing at least one of polyanilines represented by the following chemical formulas (1) to (4):

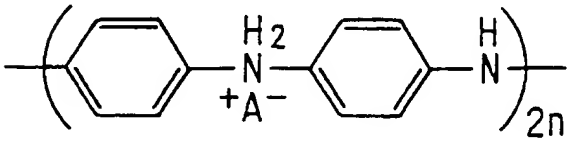
formula (1):



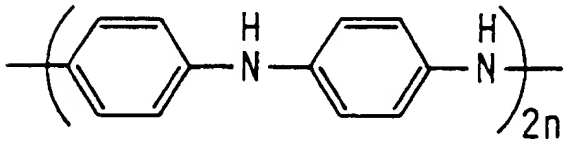
formula (2):



formula (3):



formula (4):



wherein, "A" indicates an anion, "n" indicates an integer in a range of 2-5000, "x" and "y" are the numbers which simultaneously satisfy the following equations: $x+y=1$ and $0 \leq y \leq 0.5$.

28. (new) The method claimed in claim 23, wherein the regenerating step is repeatedly performed in accordance with an operation of the air conditioner.

29. (new) The method claimed in claim 28, wherein the regenerating step is performed when the air conditioner is stopped.